10/560,658

PTO/SB/80 (04–05) Approved for use through 11/30/2005. OMB 0651-0035 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b). I hereby appoint: 23370 ☑ Practitioners associated with Customer Number: Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used): Registration Registration Number Number as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b). Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to: The address associated with Customer Number OR ☐ Firm or Individual Name Address State Zip City Country Email Telephone **Assignee Name and Address:** THE MORGAN CRUCIBLE COMPANY PLC Quadrant 55-57 High Street Windsor, Berkshire SL4 1EP United Kingdom A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed. SIGNATURE of Assignee of Record The individual whose signature and title is supplied below is authorized to act on behalf of the assignee Signature Date 🛷 Name Telephone

This collection of information is required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

PTO/SB/96 (09-04)
Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Particular of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(b)
Applicant/Patent Owner: Alan Robert Chapman, et al.
Application No./Patent No.: U.S. National Phase of PCT/GB2004/002642 Filed/Issue Date: 13 December 2005 Entitled: FLOW FIELD PLATE GEOMETRIES
THE MORGAN CRUCIBLE COMPANY PLC , a organization under the laws of the United Kingdom
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)
states that it is:
1. the assignee of the entire right, title, and interest; or
2. an assignee of less than the entire right, title, and interest The extent (by percentage) of its pypership interest is %
The extent (by percentage) of its ownership interest is % in the patent application/patent identified above by virtue of either:
A. An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel, Frame, or for which a copy thereof is attached.
OR
B. A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:
1. From: To:
The document was recorded in the United States Patent and Trademark Office at
Reel, Frame, or for which a copy thereof is attached.
2. From: To:
The document was recorded in the United States Patent and Trademark Office at Reel, Frame, or for which a copy thereof is attached.
3. From:
The document was recorded in the United States Patent and Trademark Office at Reel, Frame, or for which a copy thereof is attached.
Additional documents in the chain of title are listed on a supplemental sheet.
□ Copies of assignments or other documents in the chain of title are attached. □ NOTE: A separate copy (i.e., a true copy of the original document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]
The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee. 27/2/06
Signature Date
David Coker Tolephone Number
Printed or Typed Name Telephone Number
Secretary
Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. 22313-1450.

<u>ASSIGNMENT</u>

THIS ASSIGNMENT IS MADE BETWEEN

Mark Christopher Turpin of, c/o Morgan Group Technology Limited, Bewdley Road, Stourport-on-Severn, Worcestershire DY13 8QR, England (hereinafter called "TURPIN"); and

MORGANITE ELECTRICAL CARBON LIMITED, Upper Fforest Way, Morriston, Swansea South Wales SA6 8PP (hereinafter called "MECL")

AS ASSIGNORS,

AND

THE MORGAN CRUCIBLE COMPANY PLC, of Morgan House, Madeira Walk, Windsor, Berkshire SL4 1EP, England. (hereinafter called "MCC")

AS ASSIGNEE.

WHEREAS:-

- 1. TURPIN is employed in a technical capacity by MECL;
- 2. MECL is a wholly owned subsidiary of MCC;
- 3. TURPIN is an inventor for invention (hereinafter called "the Invention") subject of Patent Applications having the title, agent's reference, application number, and filing dates recited below:-

FLOW FIELD PLATE	BP-09-0361	GB 0316946.3	18 July 2003
1	Dr os seri		
GEOMETRIES	77 00 0409	GB 0407638.6	2 April 2004
FLOW FIELD PLATE	BP-09-0408	GB 0407030.0	
GEOMETRIES			17 June 2004
FLOW FIELD PLATE	FP-09-0855	PCT/GB2004/002642	1 / June 2004
GEOMETRIES			

(hereinafter called "the Applications");

4. The parties hereto at all times have desired that MCC shall hold all rights in the Invention in the United Kingdom and elsewhere absolutely.

- 5. TURPIN, and MECL hereby confirm their assignment absolutely to MCC of all rights whatsoever that each may have in the Invention to hold to the full extent that each would have had had this Assignment not been made.
- 6. It is further confirmed that this assignment is effective to transfer the rights in each of the countries designated in PCT/GB2004/002642.
- 7. For the avoidance of doubt, and without restricting the generality of the above, it is confirmed that MCC had the right to file the Applications, and shall have the right to file applications for protection of whatever form and in whichever countries it may choose to do so.
- 8. It is further confirmed that MCC have the right to claim priority from the Applications.
- 9. All rights that MCC take under this assignment are freely assignable by MCC.

- 10. The consideration for the Assignment is in the premises above but in deference to those jurisdictions where a monetary consideration is required to effect an assignment MCC pays to each of the ASSIGNORS the sum of £1 (one pound sterling) the receipt, adequacy, and sufficiency of which the ASSIGNORS acknowledge on signature hereto.
- 11. The assignment has an effective date of the earliest of the Applications.

		Date		
Signature M May	ř	30/9/04		
Mark Christopher Turpin				
Witnessed by:	16 W. Luces	uns Closo, East Licatio hersting LETR als		
J. Temdy	IL WILL	LOW CLOSE LEAKE, LEICS LEIZ byu		
Date				
For and on behalf of Morg Electrical Carbon Limited	ganite	28-4-06 Please type name and position of signatory		
Signature	·	Date 13th APRIL 2006		
For and on behalf of The Crucible Company plc	Morgan	Please type name and position of signatory D. J. COIKER COMPANY SEWETARY		

ASSIGNMENT

THIS ASSIGNMENT IS MADE BETWEEN

Ian Michael Mellor of, c/o Morgan Group Technology Limited, Bewdley Road, Stourport-on-Severn, Worcestershire DY13 8QR, England (hereinafter called "MELLOR"); and

MORGAN GROUP TECHNOLOGY LIMITED, Bewdley Road, Stourport-on-Severn, Worcestershire DY13 8QR, England (hereinafter called "MGT") AS ASSIGNORS,

AND

THE MORGAN CRUCIBLE COMPANY PLC, of Morgan House, Madeira Walk, Windsor, Berkshire SL4 1EP, England. (hereinafter called "MCC") AS ASSIGNEE.

WHEREAS:-

- 1. MELLOR is employed in a technical capacity by MGT;
- 2. MGT is a wholly owned subsidiary of MCC;
- 3. MELLOR is an inventor for invention (hereinafter called "the Invention") subject of Patent Applications having the title, agent's reference, application number, and filing dates recited below:-

FLOW FIELD PLATE	BP-09-0408	GB 0407638.6	2 April 2004
GEOMETRIES			_
FLOW FIELD PLATE	FP-09-0855	PCT/GB2004/002642	17 June 2004
GEOMETRIES			

(hereinafter called "the Applications");

4. The parties hereto at all times have desired that MCC shall hold all rights in the Invention in the United Kingdom and elsewhere absolutely.

- 5. MELLOR, and MGT hereby confirm their assignment absolutely to MCC of all rights whatsoever that each may have in the Invention to hold to the full extent that each would have had had this Assignment not been made.
- 6. It is further confirmed that this assignment is effective to transfer the rights in each of the countries designated in PCT/GB2004/002642.
- 7. For the avoidance of doubt, and without restricting the generality of the above, it is confirmed that MCC had the right to file the Applications, and shall have the right to file applications for protection of whatever form and in whichever countries it may choose to do so.
- 8. It is further confirmed that MCC have the right to claim priority from the Applications.
- 9. All rights that MCC take under this assignment are freely assignable by MCC.

- 10. The consideration for the Assignment is in the premises above but in deference to those jurisdictions where a monetary consideration is required to effect an assignment MCC pays to each of the ASSIGNORS the sum of £1 (one pound sterling) the receipt, adequacy, and sufficiency of which the ASSIGNORS acknowledge on signature hereto.
- 11. The assignment has an effective date of the earliest of the Applications.

		Fo
Signature		Date
gan Mellor	^	24 03 04
Ian Michael MELLOR		
Witnessed by:	2. N	. Maura
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	ADy	ANDRES DEIGHTON
		ANDEC DEIGHTON
Signature		Date
		24/8/04
For and on behalf of Morg	an Group	Please type name and position of signatory $D \in \mathcal{N} \cup S CHI \in \mathcal{N} \subseteq G$
Technology Limited		1
		COMPANY SECRETARY
		· · · · · · · · · · · · · · · · · · ·
Signature		Date
1		13/12/05
For and on behalf of The M	lorgan	Please type name and position of signatory
Crucible Company plc	Burr	D. J. COINEX CERPANY SECRETARY

ASSIGNMENT

THIS ASSIGNMENT IS MADE BETWEEN

Alexandre Jouvray of, c/o Morgan Group Technology Limited, Bewdley Road, Stourport-on-Severn, Worcestershire DY13 8QR, England (hereinafter called "JOUVRAY"); and MORGAN GROUP TECHNOLOGY LIMITED, Bewdley Road, Stourport-on-Severn, Worcestershire DY13 8QR, England (hereinafter called "MGT") AS ASSIGNORS,

AND

THE MORGAN CRUCIBLE COMPANY PLC, of Morgan House, Madeira Walk, Windsor, Berkshire SL4 1EP, England. (hereinafter called "MCC") AS ASSIGNEE.

WHEREAS:-

- 1. JOUVRAY is employed in a technical capacity by MGT;
- 2. MGT is a wholly owned subsidiary of MCC;
- 3. JOUVRAY is an inventor for invention (hereinafter called "the Invention") subject of Patent Applications having the title, agent's reference, application number, and filing dates recited below:-

FLOW FIELD PLATE	BP-09-0408	GB 0407638.6	2 April 2004
GEOMETRIES			
FLOW FIELD PLATE	FP-09-0855	PCT/GB2004/002642	17 June 2004
GEOMETRIES			

(hereinafter called "the Applications");

4. The parties hereto at all times have desired that MCC shall hold all rights in the Invention in the United Kingdom and elsewhere absolutely.

- 5. JOUVRAY, and MGT hereby confirm their assignment absolutely to MCC of all rights whatsoever that each may have in the Invention to hold to the full extent that each would have had had this Assignment not been made.
- 6. It is further confirmed that this assignment is effective to transfer the rights in each of the countries designated in PCT/GB2004/002642.
- 7. For the avoidance of doubt, and without restricting the generality of the above, it is confirmed that MCC had the right to file the Applications, and shall have the right to file applications for protection of whatever form and in whichever countries it may choose to do so.
- 8. It is further confirmed that MCC have the right to claim priority from the Applications.
- 9. All rights that MCC take under this assignment are freely assignable by MCC.

- 10. The consideration for the Assignment is in the premises above but in deference to those jurisdictions where a monetary consideration is required to effect an assignment MCC pays to each of the ASSIGNORS the sum of £1 (one pound sterling) the receipt, adequacy, and sufficiency of which the ASSIGNORS acknowledge on signature hereto.
- 11. The assignment has an effective date of the earliest of the Applications.

Signature	Date 17-08-04
Alexandre JOUVRAY	
Witnessed by!	Sylvain Jamais
	ANDREW DEIGNAND

Signature S.J. Mull	27/8/04
For and on behalf of Morgan Group Technology Limited	Please type name and position of signatory Dr. Stefan Kukula, Head of Computational Modelling Group,

Signature	Date
	13/1-/05
For and on behalf of The Morgan Crucible Company plc	Please type name and position of signatory D-J-COKEL CDYPANY SECRETARY

<u>ASSIGNMENT</u>

THIS ASSIGNMENT IS MADE BETWEEN

Sylvain Jamais of, c/o Morgan Group Technology Limited, Bewdley Road, Stourport-on-Severn, Worcestershire DY13 8QR, England (hereinafter called "JAMAIS"); and MORGAN GROUP TECHNOLOGY LIMITED, Bewdley Road, Stourport-on-Severn, Worcestershire DY13 8QR, England (hereinafter called "MGT") AS ASSIGNORS,

AND

THE MORGAN CRUCIBLE COMPANY PLC, of Morgan House, Madeira Walk, Windsor, Berkshire SL4 1EP, England. (hereinafter called "MCC") AS ASSIGNEE.

WHEREAS:-

- 1. JAMAIS is employed in a technical capacity by MGT;
- 2. MGT is a wholly owned subsidiary of MCC;
- 3. JAMAIS is an inventor for invention (hereinafter called "the Invention") subject of Patent Applications having the title, agent's reference, application number, and filing dates recited below:

FLOW FIELD PLATE GEOMETRIES	BP-09-0408	GB 0407638.6	2 April 2004
FLOW FIELD PLATE GEOMETRIES	FP-09-0855	PCT/GB2004/002642	17 June 2004

(hereinafter called "the Applications");

4. The parties hereto at all times have desired that MCC shall hold all rights in the Invention in the United Kingdom and elsewhere absolutely.

- 5. JAMAIS, and MGT hereby confirm their assignment absolutely to MCC of all rights whatsoever that each may have in the Invention to hold to the full extent that each would have had had this Assignment not been made.
- 6. It is further confirmed that this assignment is effective to transfer the rights in each of the countries designated in PCT/GB2004/002642.
- 7. For the avoidance of doubt, and without restricting the generality of the above, it is confirmed that MCC had the right to file the Applications, and shall have the right to file applications for protection of whatever form and in whichever countries it may choose to do so.
- 8. It is further confirmed that MCC have the right to claim priority from the Applications.
- 9. All rights that MCC take under this assignment are freely assignable by MCC.

- 10. The consideration for the Assignment is in the premises above but in deference to those jurisdictions where a monetary consideration is required to effect an assignment MCC pays to each of the ASSIGNORS the sum of £1 (one pound sterling) the receipt, adequacy, and sufficiency of which the ASSIGNORS acknowledge on signature hereto.
- 11. The assignment has an effective date of the earliest of the Applications.

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Signature	· .	25/8/200 G
Sylvain JAMAIS		
Witnessed by:	Avo	
	Am	MEL DEILHTON
	ALEXAND	ORE JOUYRAY
Signature		Date
5.J. Wulnt	<u></u>	25/8/2004
For and on behalf of Morg	an Group	Please type name and position of signatory Dr Stefan Kukula – Manager
Technology Limited		Computational Modelling Group
Signature		Date
		13/12/65
For and on behalf of The N	/lorgan	Please type name and position of signatory
Crucible Company plc	_	D. V. COKEN Contrary 35 lettary

<u>ASSIGNMENT</u>

THIS ASSIGNMENT IS MADE BETWEEN

Alan Robert Chapman of, c/a Morgan Group Technology Limited, Bewdley Road, Stourport-on-Severn, Worcestershire DY13 8QR, England (hereinafter called "CHAPMAN"); and

MORGAN GROUP TECHNOLOGY LIMITED, Bewdley Road, Stourport-on-Severn, Worcestershire DY13 8QR, England (hereinafter called "MGT")

AS ASSIGNORS,

AND

THE MORGAN CRUCIBLE COMPANY PLC, of Morgan House, Madeira Walk, Windsor, Berkshire SL4 1EP, England. (hereinafter called "MCC")

AS ASSIGNEE.

WHEREAS:-

- 1. CHAPMAN is employed in a technical capacity by MGT;
- 2. MGT is a wholly owned subsidiary of MCC;
- 3. CHAPMAN is an inventor for invention (hereinafter called "the Invention") subject of Patent Applications having the title, agent's reference, application number, and filling dates recited below:-

FLOW FIELD PLATE GEOMETRIES	BP-09-0408	GB 0407638.6	2 April 2004
	FP-09-0855	PCT/GB2004/002642	17 June 2004

(hereinafter called "the Applications");

4. The parties hereto at all times have desired that MCC shall hold all rights in the Invention in the United Kingdom and elsewhere absolutely.

- CHAPMAN, and MGT hereby confirm their assignment absolutely to MCC of all rights whatsoever that each may have in the invention to hold to the full extent that each would have had had this Assignment not been made.
- 6. It is further confirmed that this assignment is effective to transfer the rights in each of the countries designated in PCT/GB2004/002642.
- 7. For the avoidance of doubt, and without restricting the generality of the above, it is confirmed that MCC had the right to file the Applications, and shall have the right to file applications for protection of whatever form and in whichever countries it may choose to do so.
- 8. It is further confirmed that MCC have the right to claim priority from the Applications.
- 9. All rights that MCC take under this assignment are freely assignable by MCC.
- 10. The consideration for the Assignment is in the premises above but in deference to those jurisdictions where a monetary consideration is required to effect an assignment MCC pays to each of the ASSIGNORS the sum of £1 (one pound sterling) the receipt, adequacy, and sufficiency of which the ASSIGNORS acknowledge on signature hereto.
- 11. The assignment has an effective date of the earliest of the Applications.

Clanatura	Date .		
Signature		1	1
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TO THE STATE OF TH		08/10/2004		
Alan Robert CHAPMAN				
Witnessed by:	R Baylin' 05/10/04			
Signature		Date		
For and on behalf of Morgan Group Technology Limited		Please type name and position of signatory		
Signature		Date (3 / () / 0) (
For and on behalf of T Morgan Crucible Com plc		Please type name and position of signatory D-J-COKEY Confirm SECRETARY		